



US007844915B2

(12) **United States Patent**
Platzer et al.

(10) **Patent No.:** **US 7,844,915 B2**
(45) **Date of Patent:** **Nov. 30, 2010**

(54) **APPLICATION PROGRAMMING
INTERFACES FOR SCROLLING
OPERATIONS**

7,009,626 B2 3/2006 Anwar
7,088,374 B2 8/2006 David et al.
7,117,453 B2 10/2006 Drucker et al.
7,173,623 B2 2/2007 Calkins et al.
7,337,412 B2 2/2008 Guido et al.
7,346,850 B2 3/2008 Swartz et al.

(75) Inventors: **Andrew Platzer**, Santa Clara, CA (US);
Scott Herz, Santa Clara, CA (US)

(73) Assignee: **Apple Inc.**, Cupertino, CA (US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 583 days.

(Continued)

FOREIGN PATENT DOCUMENTS

(21) Appl. No.: **11/620,717**

EP 1517228 3/2005

(22) Filed: **Jan. 7, 2007**

(65) **Prior Publication Data**

US 2008/0168384 A1 Jul. 10, 2008

(Continued)

OTHER PUBLICATIONS

(51) **Int. Cl.**

G06F 3/00 (2006.01)

G06F 3/033 (2006.01)

G06F 3/041 (2006.01)

G06F 3/048 (2006.01)

Toshiyuki Masui et al.; "Elastic Graphical Interfaces for Precise Data
Manipulation", 1995; ACM; pp. 143-144.*

(Continued)

(52) **U.S. Cl.** **715/781**; 715/784; 715/800;
345/173

Primary Examiner—Xiomara L. Bautista

(58) **Field of Classification Search** 715/764,
715/765, 784, 786, 788, 800, 864, 866, 973,
715/974; 345/156, 157, 169, 173

(74) *Attorney, Agent, or Firm*—Blakely, Sokoloff, Taylor &
Zafman LLP

See application file for complete search history.

(57) **ABSTRACT**

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,534,893 A 7/1996 Hansen et al.
5,903,902 A 5/1999 Orr et al.
6,028,602 A 2/2000 Weidenfeller et al.
6,486,896 B1 11/2002 Ubillos
6,677,965 B1 * 1/2004 Ullmann et al. 715/786
6,741,996 B1 5/2004 Brechner et al.
6,839,721 B2 1/2005 Schwols
6,903,927 B2 6/2005 Anlauff
6,957,392 B2 10/2005 Simister et al.
6,958,749 B1 * 10/2005 Matsushita et al. 345/175

At least certain embodiments of the present disclosure
include an environment with user interface software interact-
ing with a software application. A method for operating
through an application programming interface (API) in this
environment includes transferring a set bounce call. The
method further includes setting at least one of maximum and
minimum bounce values. The set bounce call causes a bounce
of a scrolled region in an opposite direction of a scroll based
on a region past an edge of the scrolled region being visible in
a display region at the end of the scroll.

21 Claims, 37 Drawing Sheets

